

Claims

Claims 1-80 (cancelled)

Claim 81 (previously added) A method for producing a soy protein material comprising,
forming an aqueous slurry of a soy protein material
treating the slurry with an enzyme preparation containing an acid
phosphatase enzyme at a temperature, a pH, and for a time period effective for said
enzyme preparation to degrade ribonucleic acids in the soy protein material; and
washing the soy protein material to remove degraded ribonucleic acids.

Claim 82 (previously added) The method of claim 81 wherein said protein material is a
soy protein concentrate or a soy protein isolate.

Claim 83 (previously added) The method of claim 81 wherein said slurry contains from
about 2% to about 30% of the protein material by weight.

Claim 84 (previously added) The method of claim 83 wherein said slurry contains from
about 5% to about 20% of the protein material by weight.

Claim 85 (previously added) The method of claim 83 wherein said slurry contains from
about 10% to about 18% of the protein material by weight.

Claim 86 (previously added) The method of claim 81 wherein treatment of said slurry
with said enzyme preparation is effective to degrade a majority of ribonucleic acids in
said soy protein material.

Claim 87 (previously added) The method of claim 86 wherein washing the treated slurry
is effective to remove said degraded ribonucleic acids to provide a soy protein material
from which a majority of ribonucleic acids have been removed.

Claim 88 (previously added) The method of claim 81 wherein treatment of said slurry with said enzyme preparation is effective to degrade at least 60% of ribonucleic acids in said soy protein material.

Claim 89 (previously added) The method of claim 88 wherein washing the treated slurry is effective to remove said degraded ribonucleic acids to provide a soy protein material from which at least 60% of ribonucleic acids have been removed.

Claim 90 (previously added) The method of claim 81 wherein treatment of said slurry with said enzyme preparation is effective to degrade at least 70% of ribonucleic acids in said soy protein material.

Claim 91 (previously added) The method of claim 90 wherein washing the treated slurry is effective to remove said degraded ribonucleic acids to provide a soy protein material from which at least 70% of ribonucleic acids have been removed.

Claim 92 (previously added) The method of claim 81 wherein treatment of said slurry with said enzyme preparation is effective to degrade at least 80% of ribonucleic acids in said soy protein material.

Claim 93 (previously added) The method of claim 92 wherein washing the treated slurry is effective to remove said degraded ribonucleic acids to provide a soy protein material from which at least 80% of ribonucleic acids have been removed.

Claims 94-95 (cancelled)

Claim 96 (previously added) The method of claim 81 wherein treatment of said slurry with said enzyme preparation is effective to degrade phytic acid and phytates in said soy protein material.

Claim 97 (previously added) The method of claim 96 wherein washing said treated slurry is effective to remove said degraded phytic acid and phytates to provide a soy protein material from which phytic acid and phytates have been removed.

Claim 98 (previously added) The method of claim 81 wherein said slurry is treated with an acid phosphatase at a pH of from about 3 to about 6.

Claim 99 (previously added) The method of claim 98 wherein said slurry is treated with an acid phosphatase at a pH of from about 3.5 to about 5.5.

Claim 100 (previously added) The method of claim 98 wherein said slurry is treated with an acid phosphatase at a pH of from about 4 to about 5.

Claim 101 (previously added) The method of claim 98 wherein said slurry is treated with an acid phosphatase at a pH of from about 4.4 to about 4.6.

Claim 102 (previously added) The method of claim 81 wherein said slurry is treated with an acid phosphatase at a temperature of from about 20°C to about 70°C.

Claim 103 (previously added) The method of claim 102 wherein said slurry is treated with an acid phosphatase at a temperature of from about 40°C to about 55°C.

Claim 104 (previously added) The method of claim 81 wherein said slurry is treated with an acid phosphatase wherein said acid phosphatase has an activity of about 600 KPU/g of curd solids to about 1400 KPU/g of curd solids.

Claim 105 (previously added) The method of claim 81 wherein said slurry is treated with an acid phosphatase wherein said acid phosphatase is present in said slurry in an amount of from about 0.1% to about 10% of the protein material, by weight.

Claim 106 (previously added) The method of claim 105 wherein said slurry is treated with an acid phosphatase wherein said acid phosphatase is present in said slurry in an amount of from about 0.3% to about 5% of the protein material, by weight.

Claim 107 (previously added) The method of claim 81 wherein said slurry is treated with said acid phosphatase for a period of from about 30 minutes to about 4 hours.

Claim 108 (previously added) The method of claim 107 wherein said slurry is treated with said acid phosphatase for a period of from about 45 minutes to about 3 hours.

Claim 109 (previously added) The method of claim 81 further comprising a step of drying said treated and washed slurry to provide a purified soy protein material.

Claim 110 (previously added) The method of claim 81 further comprising a step of heat treating said treated slurry.

Claim 111 (previously added) The method of claim 81 further comprising a step of treating said washed and acid phosphatase treated soy protein material slurry with a protease enzyme at a temperature, a pH, and for a time period sufficient to hydrolyze said protein in said slurry.

Claim 112 (previously added) The method of claim 111 wherein said protease enzyme is present in said slurry in a concentration of from about 0.1% to about 10% of the protein material in said slurry by dry weight.

Claim 113 (previously added) The method of claim 111 further comprising the step of heat treating the hydrolyzed protein slurry.

Claim 114 (previously added) The method of claim 111 further comprising the step of drying the hydrolyzed protein material after hydrolysis with said protease enzyme.

Claim 115 (previously added) The method of claim 81 wherein said treatment of said soy protein soy protein material slurry with an enzyme preparation containing an acid phosphatase and said wash of said treated slurry are effective to lower the mineral content in the soy protein material.

Claim 116 (previously added) The method of claim 81 wherein said soy protein material is washed by diluting said treated slurry with water and subsequently removing at least a portion of said diluent from said soy protein material.

Claim 117 (previously added) A method of producing a soy protein material comprising, treating an aqueous slurry of a soy protein material with an enzyme preparation containing an acid phosphatase enzyme at a temperature, a pH, and for a time period effective for said enzyme preparation to degrade ribonucleic acids in the soy protein material.

Claim 118 (previously added) The method of claim 117 wherein said soy protein material is a soy protein concentrate or a soy protein isolate.

Claim 119 (previously added) The method of claim 117 wherein treatment of the slurry with said enzyme preparation is effective to degrade a majority of ribonucleic acids in the soy protein material.

Claim 120 (previously added) The method of claim 117 wherein treatment of the slurry with said enzyme preparation is effective to degrade at least 80% of ribonucleic acids in the soy protein material.

Claim 121 (previously added) The method of claim 117 wherein said enzyme preparation is effective to degrade phytic acid and phytates in said soy protein material.

Claim 122 (previously added) The method of claim 117 wherein said slurry is treated with an enzyme preparation containing an acid phosphatase at a pH of from about 3 to 6.

Claim 123 (previously added) The method of claim 117 wherein said slurry is treated with an enzyme preparation containing an acid phosphatase at a temperature of from about 20°C to about 70°C.

Claim 124 (previously added) The method of claim 117 wherein said slurry is treated with an enzyme preparation containing an acid phosphatase wherein said enzyme preparation has an activity of greater than 500 KPU/kg of protein material in said slurry.

Claims 125-132 (cancelled)